DIGITRAN®
Unit of Electro Switch Corp.

SERIES 56

MINIATURE ROTARY SWITCHES

Description: The 56000 High Reliability Sealed Rotary Switch is a 0.625" diameter with 1/4" or 1/8"diameter shaft. This series is available in single deck and with optional pull or push to enter or exit functions.

- » Meets or Exceeds MIL-DTL-3786/13 requirements
- » 0.625" Body Diameter
- » 0.250" or 0.125" Shaft Diameter
- » 75,000 Mechanical Life Minimum
- » 30°, 36°, 45° Indexing
- » Multiple Pole Options
- » Multiple Output Code Options
- » Gold Plated Solder Pin Terminals or PCB
- » Flux Sealed

Mechanical Specifications:

- » Post panel depth for 1 deck: .80" (with pull feature)
- » Rotational torque: 8-24 in-oz.
- » Stop strength: 8.0 in-lbs. minimum
- » Pull/Push-To-Turn (PPT) force: .5-2.0 lbs.
- » PPT distance: .060" typical
- » Weight: 13 grams maximum

Electrical Specifications:

- » Switching current:
- » 500 mA max @ 28 VDC resistive
  250 mA max @ 28 VDC inductive
- » Non-switch (continuous): 3 A max @ 28 VDC (20°C temperature rise)
- » Contact style: Non-shorting or shorting
- » Contact resistance: 10 mΩ max initial, 50 mΩ max after life
- » Insulation resistance: 1000 Megaohms minimum IAW MIL-STD-202, Method 302, Test condition A (shaft and terminals)
- » Dielectric strength: 750 VRMS IAW MIL-STD-202, Method 301 (shaft and terminals)

Environmental Specifications:

- » Altitude: 70,000 feet
- » Temperature: -60°C to +85°C (Working) -65°C to +125°C (Storage)
- » Thermal shock: -55°C to +85°C per MIL-STD-202, Method 107, Test condition A
- » Shock: 100 G's, 6 milliseconds IAW MIL-STD-202, Method 213, Test condition I
- » Vibration: 15 G's at 70—2000 Hz; .06" double amplitude at 10—70 Hz MIL-STD-202, Method 204, Test condition B
- » Explosion proof: IAW MIL-STD-202, Method 109 with test load 125 mA @ 28 VDC
- » Salt spray: IAW MIL-STD-202, Method 101, Test condition B
- » Sand and Dust: IAW MIL-STD-202, Method 110, Test condition B
- » EMI/RFI Shielding: IAW MIL-STD-3786 with 2 ohms shaft to ground

Material Specifications:

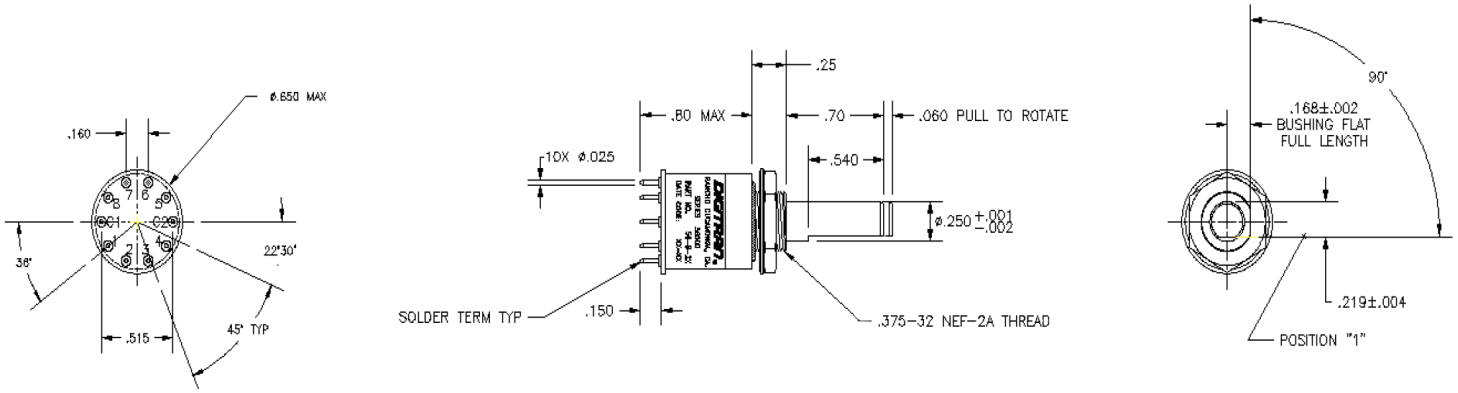
- » Molded parts: Thermoplastic
- » Machine parts: Stainless steel and non-corrosive materials
- » Printed circuit board: FR-4 laminate per MIL-PRF-55110
- » Contact: Beryllium copper with gold plating
- » Terminals: Gold plated pins
- » Hardware: Cadmium plated brass (nut and washer)

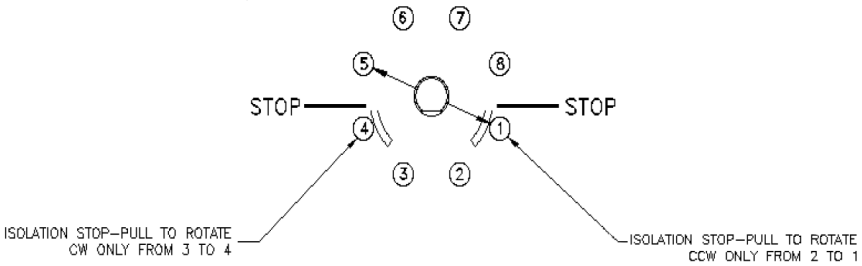
Applications

» Avionics Panels
» Display Systems
» Entertainment Equipment
» High Reliability Controllers
» Rugged Instrumentation
» Cockpit Displays

DIGITRAN SERIES 56 – MINIATURE ROTARY SWITCHES

Dimensional, Mechanical and Electrical Data for the 56-B-0002 variant Single Deck, 2 Pole, 4 Position rotary with Pull-to-Turn Mechanical Isolation of Positions 3 and 4 (Typical of 56000 Series)





SWITCH ROTATION DIAGRAM

SHOWN IN POSITION 1
VIEW FROM SHAFT END

POSITION	COMMON "C1" SHORTING CONN TO TERM				COMMON "C2" SHORTING CONN TO TERM			
	1	2	3	4	5	6	7	8
1	●				●			
2		●				●		
3			●				●	
4				●				●

SWITCH FUNCTION

Unless Otherwise Specified: Tolerances – Inches 2 Places = ±.03, 3 Places = ±.010; Angular = ±2°

ORDERING GUIDE

56X - XX 1- X X X - X XX X

561 = 0.125" Dia Shaft, Stainless Steel Bushing
562 = 0.25" Dia Shaft, Stainless Steel Bushing
563 = 0.125" Dia Shaft, Aluminum Bushing
564 = 0.25" Dia Shaft, Aluminum Bushing
565 = 0.125" Dia Shaft, Composite Bushing
566 = 0.25" Dia Shaft, Composite Bushing

INDEXING ANGLE (30°, 36°, 45°)

1 DECK ONLY

POLES PER DECK (2 Max)

OUTPUT CODE
(1=Direct, 2=Binary, 3=Custom, 4=Mixed)

TERMINAL STYLE (1=Solder Tabs, 2=Header Pins, 3=PCB Pins)

STOP FEATURES:
With S (stop feature): For this option, add number of active positions for switch. For example, S5 means stops between positions 1 and 5.
With C (continuous): Full turn without stops.

MIL SPEC (M*=Full MIL-DTL-3786 Compliant, X=Non-Mil) All units, M or X, Have Shaft & Panel Seal.

CONTACT STYLE (N=Non-Shorting, S=Shorting)

§ Customer To Specify Requirements By Notes or Drawing

Questions? Contact Digitran Sales Department at extension 3227, or via email at **sales@digitran-switches.com**

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